H. BRINKMANN.

THRUST BEARING WITH A PLURALITY OF CYLINDRICAL ROLLERS.

APPLICATION FILED MAR. 23, 1907.

947,368. Patented Jan. 25, 1910.

Fig. 1.

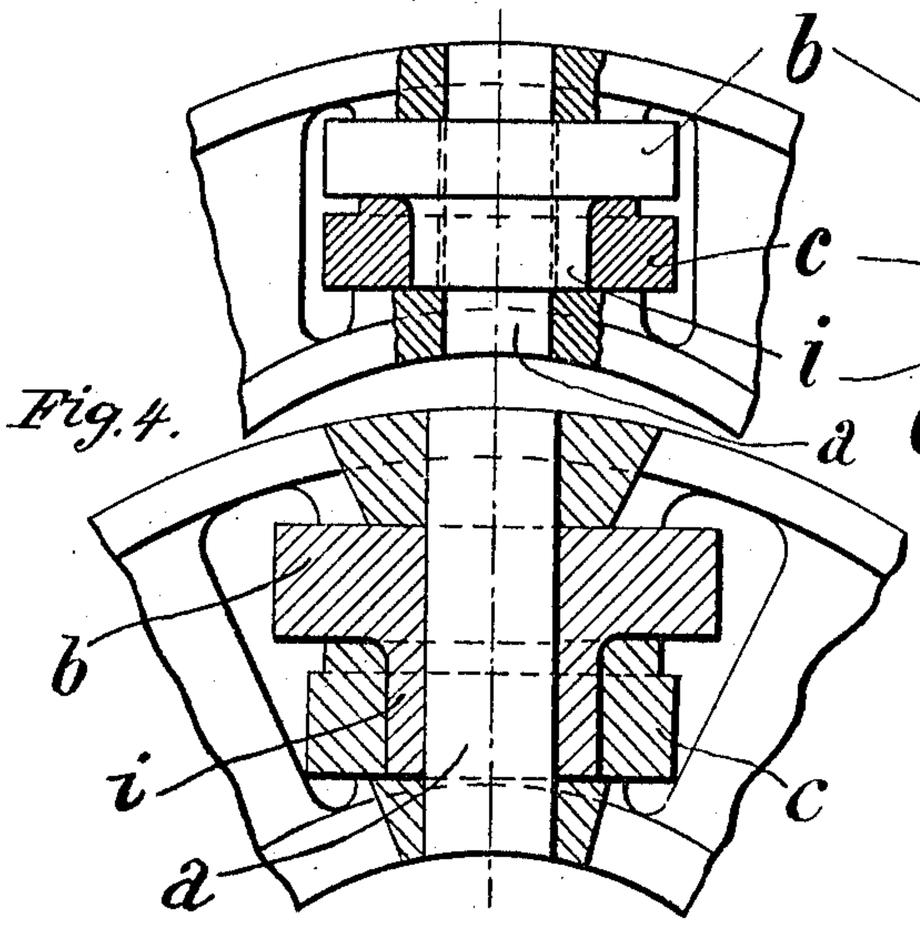
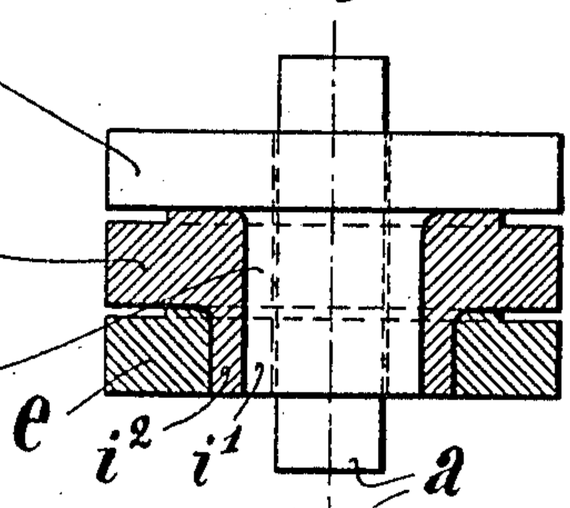


Fig. 4.

Fig. 2.



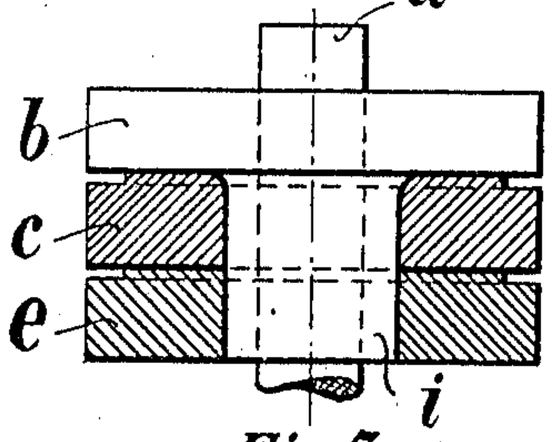
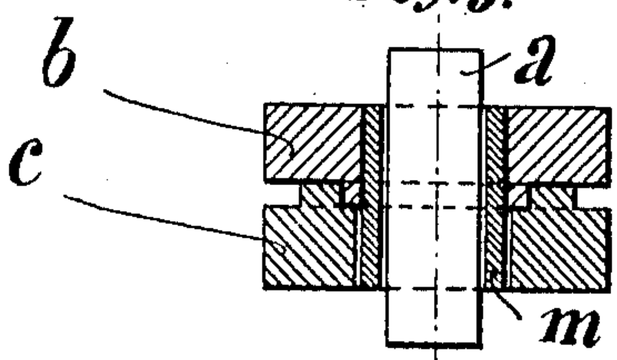


Fig. 3.

Fig. 5.



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THRUST-BEARING WITH A PLURALITY OF CYLINDRICAL ROLLERS.

947,368. Specification of Letters Patent. **Patented Jan. 25, 1910.**

Application filed March 23, 1907. Serial No. 364,072.

To all whom it may concern:

Be it known that I, HEINRICH BRINKMANN, a subject of the German Emperor, and resident of No. 60 Wohldorferstrasse, Hamburg, Germany, have invented certain new and useful Improvements in Thrust-Bearings with a Plurality of Cylindrical Rollers, of which the following is a specification.

This invention relates to improvements in thrust-bearings with a plurality of cylindrical rollers, constituting a main bearing roller, for any appropriate use and its object is to so arrange the latter relatively to each other that quick wear is effectively avoided, which is effected by having the rollers securely guided on each other by means of bosses and flanges thereon.

The accompanying drawing shows the improved arrangement in several forms of construction and in sectional views.

Figure 1 shows two rollers mounted on an axle in the guide-ring, one being provided with a central boss and the other with a lateral flange. Fig. 2 shows three rollers mounted on an axle, two of the same being provided with a central boss. Fig. 3 shows also three rollers mounted on an axle, one only being provided with a central boss. Fig. 4 shows step-rollers mounted on an axle in the guide-ring, one of the same being provided with a central boss and the other with a lateral flange. Fig. 5 shows two rollers which are mounted on the axle through the medium of a sleeve.

Referring to Fig. 1:—The roller *b* is loosely journaled on the fixed axle *a* and on its inner face is provided with a central boss *i* on which the roller *c* is movably mounted the same having on its inner face a flange which rests against the inner face of the roller *b* both rollers being by these means guided on each other so that wear of the same is effectively avoided.

Referring to Fig. 2:—The roller *b* is loosely journaled on the fixed axle *a* and on its inner face is provided with a central boss i^1 on which the roller *c* is movably mounted and also provided on its inner face with a central flange i^2 to receive thereon a third movable roller *e* the rollers *b* and *c* resting against each other by means of a lateral flange on the roller *c*. By this construction, the three rollers are guided on each other so that wear of the same is effectively avoided.

Referring to Fig. 3:—This arrangement is similar to that shown in Fig. 1, with the exception that, instead of one, two rollers *c* and *e* are movably mounted on the boss *i* of the roller *b*.

Referring to Fig. 4:—This construction is also similar to that shown in Fig. 1, with the exception that step-rollers are employed therein.

Referring to Fig. 5:—Instead of an integral boss on one of the rollers shown, a sleeve *m* may be employed which is loosely fitted to the fixed axle *a* and on which the roller *b* is rigidly fixed while the roller *c* is movably mounted thereon.

Instead of the axle *a* being fixed, the same may in all the constructions be movably mounted, in which case, however, the roller *b* (Figs. 1 to 4) or the sleeve *m* (Fig. 5) must be rigidly fixed thereon, this being not shown on the drawing as it can be understood without further illustration.

I claim:

In a thrust-bearing with a plurality of cylindrical rollers, constituting a main bearing roller, the combination with an axle, of one of the rollers mounted on said axle, a cylindrical boss on one face of said roller, another roller mounted on said boss and having a lateral flange in contact with the first named roller, for the purpose set forth.

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